CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. _____

NPDES NO. CA0079189

FOR
CITY OF VISALIA
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless and until the Regional Water Board issues a revised MRP. Sample station locations are depicted on Attachment A. Changes to sample location(s) shall be established with concurrence of Regional Water Board's staff, and a description of the revised stations shall be submitted to the Regional Water Board and attached to this Order. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the latest edition of *Guidelines Establishing Test Procedures for Analysis of Pollutants*, promulgated by USEPA (40 CFR 136) or other procedures approved by the Regional Water Board. In reporting monitoring data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with USEPA's Guidelines.

INFLUENT MONITORING

Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent. Influent monitoring shall include at least the following:

Constituent	Units	Type of Sample	Sampling Frequency
Flow	mgd	Meter	Continuous
Settleable Solids	mL/L	Grab	Daily
pH	pH units	Grab	Daily
EC[1]	µmhos/cm	24-hr Composite[3]	Daily
BOD_5[2]		24-hr Composite[3]	2/week[4]
Concentration	mg/L		
Monthly Average	mg/L		
Suspended Solids		24-hr Composite[3]	2/week[4]
Concentration	mg/L		
Monthly Average	mg/L		
Ammonia	mg/L	Grab	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly
Metals[5]	mg/L	24-hr Composite[3]	Quarterly[6]
General Minerals[7]	mg/L	24-hr Composite[3]	Annual

[1] Conductivity at 25°C.
[2] Five-day biochemical oxygen demand at 20°C.
[3] Composite samples, as referenced hereafter in this program, shall be flow-proportioned composite samples effective **3 years following adoption of this Order**.
[4] One day between sample dates.
[5] Metals referenced hereafter in this program shall include aluminum, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc.
[6] Monitoring shall be performed in January, April, July, and October.
[7] General Minerals as referred to in this program shall include Alkalinity (as $CaCO_3$), Aluminum, Bicarbonate, Boron, Calcium, Carbonate (as $CaCO_3$), Chloride, Hardness (as $CaCO_3$), Iron, Magnesium, Manganese, Nitrate, Phosphate, Potassium, Sodium, and Sulfate. A cation-anion balance shall be performed and submitted with the general minerals analytical results.

EFFLUENT MONITORING

Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall. The Discharger has identified a single sampling site for all discharges (i.e., Discharge 001 to Mill Creek, Discharge 002 to the Use Area, and Discharge 003 to onsite disposal ponds). Samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Effluent monitoring shall include at least the following:

Constituent	Units	Type of Sample	Sampling Frequency[1]
Discharge 001, 002, 003 flow	mgd	Metered[2]	Continuous[2]
Discharge 001 and 002 Maximum Chlorine Residual	mg/L	Metered[3]	Continuous[3]
Discharges 001 and 002 Chlorine Residual[4]	mg/L	Grab	Daily
Settleable Solids	mL/L	Grab	Daily
pH	pH Units	Grab	Daily
EC	µmhos/cm	24-hr Composite	Daily
Temperature	°C (°F)	Grab	Daily
BOD_5			
Concentration	mg/L	24-hr Composite	
Discharge 001			3/Week
Discharge 002 and 003			2/Week
Monthly Average	mg/L	Calculated	Monthly
Percent Removal	%	Calculated	Monthly

Constituent	Units	Type of Sample	Sampling Frequency[1]
Total Suspended Solids			

Concentration	mg/L	24-hr Composite	
Discharge 001			3/Week
Discharge 002 and 003			2/Week
Monthly Average	mg/L	Calculated	Monthly
Percent Removal	%	Calculated	Monthly
Total Coliform Organisms	MPN[5]/100 mL	Grab	
Discharge 001 (Mill Creek)			3/Week
Discharge 002 (Use Area orchards)			Daily
Ammonia (**as N**)	mg/L	Grab	2/Month
Nitrate **(as N)**	mg/L	Grab	2/Month
Nitrite (**as N**)	mg/L	Grab	2/Month
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	2/Month
Total Nitrogen	mg/L	Calculated	2/Month
Total Dissolved Solids (TDS) [6]	mg/L	24-hr Composite	Monthly
Hardness	mg/L as $CaCO_3$	24-hr Composite	2/Month[17]
Lead	mg/L	24-hr Composite	2/Month[7, 8, 17]
Oil and Grease	mg/L	Grab	Monthly
Selenium	µg/L	24-hr Composite	2/Month[8]
Bis(2-ethylhexyl)Phthalate	µg/L	24-hr Composite[12]	Monthly[8, 17]
Acute Toxicity	% Survival	24-hr Composite	Quarterly[9, 10, 17, 19]
General Minerals[11]	mg/L	24-hr Composite	2/Year[14]
Metals	mg/L	24-hr Composite	Quarterly[10]
Title 22 Constituents[12]	varies	24-hr Composite[13]	2/Year[14, 20]
Priority Pollutants[15]	µg/L	24-hr Composite[13]	Annually[16, 21]

[1] Daily, 3/Week, 2/Week, and Weekly samples coincident with influent monitoring.

[2] Continuous effluent flow monitoring systems shall be operational by no later than **3 years following adoption of this Order**, as specified in the time schedule of Provision H.15. Until that time, the Discharger shall report an estimate of the effluent flow rate based on the influent flow rate.

[3] Continuous chlorine residual monitoring systems, and composite samplers, or functional equivalents, shall be operational by no later than **4.5 years following adoption of this Order**, as specified in the time schedule of Provision H.11. Until that time, grab samples shall be collected and analyzed daily. Report daily maximum for Discharge 001 and daily minimum for Discharge 002.

[4] When Discharge 002 to the walnut orchard occurs, the Discharger shall also calculate and the report the CT value and the modal contact time for its recycled wastewater to verify compliance with Recycled Water Specification G.4.b. The CT value is the product of total chlorine residual and modal contact time measured at the same point.

[5] Most probable number.

[6] TDS referenced hereafter in this program shall be determined using Environmental Protection Agency (USEPA) Method No. 160.1 for combined organic and inorganic TDS and USEPA Method No. 160.4 for inorganic TDS or equivalent analytical procedures specified in 40 Code of Federal Regulations (CFR) Part 136. TDS monitoring shall be coincident with EC monitoring subject to Executive Officer written approval.

[7] Coincident with hardness monitoring.

[8] If after six consecutive months of monitoring, the sample test results are ND (below MDL, PQL, or DLR, whichever is the lowest, and the detection limit is at or below the SIP required ML, and upon approval of the Executive Officer, the monitoring frequency may be reduced or eliminated.

[9] Beginning **(Six months following adoption of this Order),** all acute toxicity bioassays shall be performed according to *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012* (or latest edition) using *Pimephales promelas* with no pH adjustment, unless exceptions are granted to the Discharger by the Executive Officer.

[10] January, April, July, and October.

[11] General Minerals as referred to in this program shall include the constituents in the General Minerals Analyte List presented below.

[12] Title 22 constituents, as used in this program, shall refer to constituents identified in the technical report submitted pursuant to Provision H.8.

[13] Except where required otherwise by constituent testing protocol.

[14] January and July, coincident with General Minerals and Metals analysis.

[15] Reporting for priority pollutants, as referenced in this program, shall conform with *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* Reporting Requirements, section 2.4 et seq.

[16] Coincident with hardness (i.e., General Minerals) sampling.

[17] Monitor only if discharging to Mill Creek (Discharge 001).

[18] Coincident with metals sampling.

[19] Sampling to start after installation of dechlorination facilities as required by Provision H.10.

[20] Sampling to start after completion of technical report required by Provision H.8 .

[21] Effluent monitoring for priority pollutants shall e discontinued if the Discharger decides to cease discharge to Mill Creek in accordance with Provision H.11.c.1.

The Discharger shall notify the Regional Water Board by telephone **(559) 445-5116** within 24 hours of having knowledge of any of the following when recycled water is delivered to the Use Area walnut orchard: (1) failure of chlorination equipment, (2) loss of detectable chlorine residual, and (3) effluent total coliform organism concentration exceeding 240 MPN/100 mL.

General Minerals Analyte List

Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Manganese
Aluminum	Chloride	Phosphate
Bicarbonate (as $CaCO_3$)	Hardness (as $CaCO_3$)	Potassium
Boron	Iron	Sodium
Calcium	Magnesium	Sulfate

General Minerals Sample Collection and Preservation: With the exception of influent and effluent samples, samples placed in an acid-preserved bottle must first be filtered through a 0.45 µm nominal pore size filter. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24-hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

RECEIVING SURFACE WATER MONITORING

All receiving surface water samples shall be grab samples. Each specific location shall be marked with a monument. Any proposed change in specific sampling locations after monument establishment shall require written concurrence of Regional Water Board staff. Receiving water monitoring of R.1 is necessary only when there is upstream flow in R.1. Notations regarding whether there is flow in R.1 shall be included in summaries of weekly Receiving Surface Water Monitoring. Receiving surface water monitoring shall include at least the following:

Station	Description
R-1	Upstream of the backwater conditions as described in Finding No. 32 but not to exceed 5,000 feet upstream from the discharge point to Mill Creek
R-2	Not to exceed 1,000 feet downstream from the discharge point to Mill Creek

Constituents	Units	Sampling Frequency
Dissolved Oxygen	mg/L	Weekly
PH	pH units	Weekly
pH Change (R1 – R2)	pH units	Weekly
Turbidity	NTU	Weekly
Temperature	°C (°F)	Weekly
Monthly Average Temperature Change (R1-R2)	°C (°F)	Weekly
EC	µmhos/cm	Weekly
Fecal Coliform Organisms	MPN/100 mL	Monthly
Ammonia[1]	mg/L	Weekly
Un-ionized Ammonia as N (calculated)	mg/L	Weekly
Chlorine Residual[2]	mg/L	Weekly
Lead	mg/L	Monthly[4]
Hardness (as $CaCO_3$)	mg/L	Monthly[5]
Priority Pollutants	µg/L	Annual[3]

[1] Temperature and pH shall be determined at the time of sample collection for the calculation of un-ionized

ammonia.

[2] Minimum detection limit shall be no greater than 0.01 mg/L.

[3] When Mill Creek is flowing upstream from the discharge, coincident with hardness monitoring.

[4] Monitoring frequency may be reduced or eliminated based on findings of effluent lead monitoring and upon approval of the Executive Officer.

[5] If lead monitoring frequency is reduced, the monitoring frequency of hardness reduced to coincide with the monitoring frequency of lead, except that hardness must be monitored coincident with priority pollutant monitoring.

In conducting the receiving water monitoring, a log shall be kept of the receiving water conditions throughout the reaches bounded by Stations R-l and R-2. The Discharger shall indicate in each monthly monitoring report the times during which discharge to Mill Creek (Discharge 001) occurred and the presence or absence of upstream flow during the discharge. Notes on receiving water conditions shall be summarized in the monitoring report. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Additionally, the Discharger shall at least once monthly inspect reaches of Mill Creek that are accessible to the public to note whether there is evidence of water contact and water contact recreation, and, if so, to describe the evidence in monthly monitoring reports.

THREE SPECIES CHRONIC TOXICITY MONITORING

Beginning **(1 Year after the adoption of this Order)**, Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA/821/R-02/013, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002. Chronic toxicity samples shall be collected at Discharge 001 immediately prior to discharge to Mill Creek. Samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days after receiving test results. Chronic toxicity monitoring shall include the following:

Species: *Pimephales promelas, Ceriodaphnia dubia, and Selenastrum capricornutum*
Frequency: *Quarterly*
Dilution Series: *See Table below*

Dilutions (%)					Controls	
100	50	25	12.5	6.25	Receiving Water[1]	Lab Water

		Dilutions (%)				Controls	
% Effluent	100	50	25	12.5	6.25	0	0
% Dilution Water[1]	0	50	75	87.5	93.75	100	0
% Lab Water[2]	0	0	0	0	0	0	100

[1] Dilution water may be uncontaminated receiving water, a standard synthetic (reconstituted) water, or another acceptable dilution water as defined in Section 7 of EPA/821/R-02/013. The dilution series may be altered upon written approval of Regional Water Board staff.

[2] Lab water shall meet USEPA protocol requirements.

If toxicity is found during quarterly monitoring in any of the 100 percent tests, then in addition to retesting as described above, the Discharger shall conduct chronic toxicity monitoring on a monthly basis for at least four months or until such time that chronic toxicity is absent. In addition, if toxicity is found during any quarterly toxicity monitoring, the Discharger shall initiate a TIE and TRE as specified in Provision H.5.

The toxicity testing may be modified to eliminate ammonia-related toxicity until **(4.5 years from adoption of this Order),** or until compliance with Provision H.11.g,whichever is sooner, at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

CALIFORNIA TOXICS RULE MONITORING

A. Priority Pollutants

The Discharger shall monitor the effluent and receiving water for Metals and Inorganic, Volatile Organic, Semi-Volatile Organic, and Pesticide priority pollutants **annually**. Effluent and receiving water samples shall be collected concurrently. Priority pollutants are defined as USEPA priority toxic pollutants and consist of the constituents listed in the most recent National Toxics Rule and California Toxics Rule. Volatile and Semi-Volatile Organic priority pollutants are listed in Tables 2a and 2b in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Bays, and Estuaries of California* (Implementation Policy). Results of sampling shall be submitted by the **first day of the second month** following sampling. Reporting shall conform with Implementation Policy Reporting Requirements, Section 2.4 et seq. Effluent and receiving water samples must be analyzed for pH and hardness in order to calculate translators, which are needed for pollutants that are hardness and/or pH dependent. All analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.

b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected but Not Quantified," or DNQ. The estimated chemical

concentration of the sample shall also be reported.

c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or – a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

Constituent[1,2]	Units	Type of Sample
Metals	µg/L	Grab
Mercury	µg/L	Grab
Chromium VI	µg/L	Grab
Arsenic	µg/L	Grab
Volatile Organics	µg/L	Grab
Semi-Volatile Organics	µg/L	Grab
Pesticides	µg/L	Grab

[1] Constituents shall be analyzed using a method approved by USEPA. The chosen analytical method must be able to achieve the required quantitation limit for the given constituent, as specified by the MLs listed in Appendix 4 of the Implementation Policy.

[2] Report all detected peaks.

B. Dioxin

The Discharger shall test effluent and receiving water for each of the 17 TCDD congeners listed in Table 4 of the Implementation Policy. The Discharger shall report the analytical results of the effluent and receiving water monitoring for each congener, including the minimum quantifiable level (ML) and the minimum detection level (MDL), and the measured or estimated concentration. The Discharger shall multiply each measured or estimated congener concentration by its respective toxicity equivalence factor (TEF) value and report the sum of these values. The Discharger must monitor for the presence of the 17 congeners **annually**. Results of sampling shall be submitted by the **first day of the second month** following sampling. Reporting shall conform with Implementation Policy Reporting Requirements Section 2.4 et seq.

PRETREATMENT PROGRAM MONITORING

The Discharger shall submit an annual report to the Regional Water Board, with copies to the USEPA Regional Administrator and the State Water Board, describing the Discharger's pretreatment activities over the previous 12 months. In the event that the Discharger is not in compliance with any conditions or requirements of this Order, the Discharger shall include the reasons for the noncompliance and state how and when the Discharger shall comply with such conditions and requirements. This annual report shall be submitted by **1 March** and shall contain, but not be limited to items G.1 through G.10 of

Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES) dated February 2004 (Standard Provisions).

In addition to the information required in the annual report, the Discharger shall report quarterly the information contained in G.4 (a through g) of Standard Provisions. The reports shall also describe progress towards compliance with audit or pretreatment compliance inspection requirements. Reports shall be submitted by **1st day of the second month following the end of each quarter**. The fourth quarterly report may be included as part of the annual report. If none of the aforementioned conditions exists, at a minimum, the Discharger must submit a letter certifying that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter.

SLUDGE MONITORING

The Discharger shall collect and analyze at least six representative sludge samples annually from the treatment facilities prior to disposal. Composite sludge sampling shall be performed in accordance with USEPA's *POTW Sludge Sampling and Analysis Guidance Document,* August 1989, and tested for the following metals:

Arsenic	Lead	Nickel
Cadmium	Mercury	Selenium
Copper	Molybdenum	Zinc

Sludge sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report. Prior to any disposal or land application of sludge or biosolids, or removal of sludge or biosolids from the WWTF site, the monitoring and record keeping requirements of 40 CFR 503 shall be met.

USE AREA MONITORING

The type of crop(s) irrigated, amounts of water and/or recycled water applied to the crops(s) (in acre-feet) and amounts of biosolids and chemical fertilizers (in pounds of nitrogen per acre) shall be measured and reported to the Regional Water Board quarterly in accordance with the following schedule:

Monitoring Period	Data Due
January – March	1 May
April – June	1 August
July – September	1 November
October - December	1 February

The Discharger shall utilize the form presented in Attachment F (or variation thereof subject to Regional Water Board staff approval) for reporting the Use Area monitoring data.

WATER SUPPLY MONITORING

Source water sampling stations shall be established where a representative samples of the municipal water supply can be obtained. The results shall be reported as a flow-weighted annual average and be supplemented with supporting calculations. Source water monitoring shall include:

Constituent	Units	Type of Sample	Sampling Frequency
EC	µmhos/cm	Grab	Annually
TDS	mg/L	Grab	Annually
General Minerals	mg/L	Grab	Once every three years[1]

[1] Coincident with monitoring required by the California Department of Health Services.

DISPOSAL POND MONITORING

When discharging to the WWTF's disposal ponds, samples shall be collected at a depth of 1.0 foot from the opposite side of each pond inlet between the hours of 0800 and 0900. The following shall constitute the disposal pond monitoring program:

Constituent	Units	Type of Sample	Sampling Frequency[1]
Dissolved Oxygen (DO)	mg/L	Grab	As required[2]
Freeboard	feet[3]	Observation	Daily

[1] When effluent discharged to disposal ponds.

[2] If offensive odor detected by or brought to the attention of WWTF personnel, monitor affected pond(s) daily until DO is > 1.0 mg/L. If DO results for any pond in use create an odor or nuisance, the Discharger shall implement corrective measures as specified in the operations and maintenance manual and monitor said pond daily until its DO stabilizes above 1.0 mg/L.

[3] Freeboard shall be measured in all disposal ponds to the nearest one-tenth of a foot, as determined by permanent staff gages.

GROUNDWATER MONITORING

Prior to collecting samples and after measuring the water level, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

At least quarterly and concurrently with groundwater quality sampling, the Discharger shall measure the water level in each well as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundredths above mean sea level). Samples shall be collected from approved monitoring wells and analyze for the following constituents at the following frequency:

Constituent/Parameter	Units	Type of Sample	Frequency
Depth to groundwater	To 0.01 foot (hundredths)	Measured	Quarterly[1,2]
Groundwater elevation	Above mean sea level, to 0.01 foot	Calculated	Quarterly[1,2]
pH	pH Units	Grab	Quarterly[1,2]
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly[1,2]
Total Organic Carbon	mg/L	Grab	Quarterly[1,2]
Nitrogen compounds:			
Ammonia and Ammonium ions (as NH_4)	mg/L	Grab	Quarterly[1,2]
Nitrate (as NO_3-N)	mg/L	Grab	Quarterly[1,2]
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	Quarterly[1,2]
Total Nitrogen (as N)	mg/L	Calculated	Quarterly[1,2]
Salinity compounds/parameters:			
EC	µmhos/cm	Grab	Quarterly[1,2]
Total dissolved solids	mg/L	Grab	Quarterly[1,2]
SAR[3]	None	Calculated	Quarterly[1,2]
Lead	mg/L	Grab	Quarterly[1,2]
General Minerals[4]	mg/L	Grab	Quarterly[1,2]
Title 22 Constituents[7]	varies	Grab	Quarterly[1,6] for the first year, annually[5] thereafter
Priority Pollutants[7]	varies	Grab	Annually[5,8]

[1] January, April, July and October

[2] New monitoring wells installed in accordance with Provision H.12 and used to determine background water quality shall be monitored monthly for one year, after which monitoring frequency for such wells may be returned to quarterly.

[3] Sodium adsorption ratio $(SAR) = \frac{Na}{\sqrt{\frac{Ca + Mg}{2}}}$, where Na, Cl, and Mg are in meq/L

[4] Samples shall pass through a 0.45 µm filter prior to analysis.

[5] October

[6] New monitoring wells installed in accordance with Provision H.12 and used to determine background water quality shall be monitored for Title 22 constituents as follows: After the first month's sampling, Title 22 constituents with concentrations at or above the MCL shall be monitored monthly for one year. After one year, the monitoring frequency shall be annually. Title 22 constituents with concentrations below the MCL shall be monitored as described in the table above.

[7] Monitoring of these constituents will be limited to wells selected in concurrence with Regional Water Board staff that are representative of groundwater reflecting the highest impact from the WWTF and its discharges to land.

[8] New monitoring wells installed in accordance with Provision H.12 and used to determine background water quality shall be monitored for priority pollutants as follows: After the first month's sampling, priority pollutants with concentrations at or above the reported detection limit (i.e., not reported as ND) shall be monitored quarterly for one year. After one year, the monitoring frequency shall be annually. Priority pollutants with concentrations below the reported detection limit shall be monitored as described in the table above.

The Discharger shall collect samples from its existing groundwater monitoring well network, as described in the table above, immediately upon adoption of this Order. New groundwater monitoring wells will be added to the network in accordance with Provision H.12. The Discharger shall start collecting samples from additional groundwater monitoring wells within 180 days of Executive Officer approval as described in Provision H.12, task b. In the technical report required by Provision H.11 task d describing the results of the first sampling event performed from new wells added to the groundwater monitoring well network, the Discharger shall include a detailed description of the procedures and techniques for: (a) sample collection, including purging techniques, sampling equipment, and decontamination of sampling equipment; (b) sample preservation and shipment; (c) analytical procedures; and (d) chain of custody control. As it continues to monitor groundwater pursuant to this program, the Discharger shall report when it deviates from these procedures and techniques.

Additionally, the Discharger shall include in the Provision H.12 task d technical report a technical description of proposed Data Analysis Methods for evaluating groundwater monitoring data (e.g., equivalent or similar to that described in Title 27, section 20415(e)(7-10)), consisting, at a minimum, methods to: (a) characterize natural background water quality of monitored constituents; (b) determine statistically significant differences between background and compliance wells for constituents that do not have water quality objectives or have background concentrations that exceed water quality objectives; and (c) select the minimum sample size required for the proposed data analysis approach

and, if greater than that required by this program (i.e., quarterly), identification of when and how the additional samples will be collected during the one-year groundwater characterization period.

The network-wide false positive rate and statistical power are directly related. That is, as the false-positive rate increases, power, the ability of the statistical test to detect an actual release, also increases. Conversely, as the false-positive rate decreases, statistical power also decreases. Strategies to minimize the network-wide false positive rate and maximize a statistical test's power generally require careful review of the analytical data set, selection of a minimum number of representative wells and constituents to compare, and a retesting procedure for wells when an elevated concentration is detected[1]. Due to the importance of these factors performing statistical analyses of groundwater data, the Discharger must also include in the Provision H.12 task e technical report a technical discussion on how it intends to (a) minimize network-wide false positive rate to less than five percent, and (b) maximize statistical power. As it continues to monitor groundwater pursuant to this program, the Discharger shall report when it deviates from the proposed Data Analysis Methods.

After one full year of groundwater monitoring, the Discharger shall analyze monitoring data from background well(s) to compute background water quality values for monitored constituents selected in concurrence with Regional Water Board staff to perform an initial assessment of whether there is evidence of an impact from the WWTF operation or discharge. To complete this task, the Discharger shall follow its proposed Data Analysis Methods described in the technical report required by Provision H.12 task e. Reports thereafter shall be submitted quarterly by the **1st day of the second month** after the prescribed sample collection and shall include the same analysis.

The Discharger shall characterize groundwater quality using the proposed Data Analysis Method on constituents below selected in concurrence with Regional Water Board staff:

Groundwater Constituents to Evaluate Using Data Analysis Method

Alkalinity (as $CaCO_3$)	Hardness (as CaCO3)	Sodium
Ammonia (as N)	Magnesium	Sulfate
Bicarbonate (as CaCO3)	Nitrate (as N)	TDS
Boron	Iron and Manganese	TKN
Calcium	Phosphate	TOC
Chloride	Potassium	Total Nitrogen
	EC	

REPORTING

At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described herein.

[1] A detailed discussion of these topics can be found in Addendum to Interim Final Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, USEPA, July 1992.

All reports submitted in response to this program shall comply with the signatory requirements of Standard Provision D.6. Monitoring results shall be submitted to the Regional Water Board by the **1st day of the second month** following sample collection. Quarterly monitoring results shall be submitted by the **1st day of the second month** following each calendar quarter. Annual monitoring results shall be submitted by **28 February** of each year. Reports shall be submitted whether or not there was a discharge during the reporting period. Failure to submit a report will result in an assessment of a Mandatory Minimum Penalty pursuant to CWC Section 13385. Pursuant to CWC Section 13385.1, any monitoring report submitted more than 30 days late is subject to a Mandatory Minimum Penalty.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD_5 and Suspended Solids, should be determined and recorded. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

By **1 February of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal (Standard Provision A.5).
2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.
3. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.6).
4. A statement whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment facility as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. The results of an annual evaluation conducted pursuant to Standard Provision B.5 and a figure depicting monthly average discharge flow for the past five years.
6. The most recent annual water supply report for the City of Visalia and for the unincorporated community of Goshen, if different.
7. A description for the past calendar year of the treatment performance of Southern California Edison's groundwater cleanup process for removing phenol and pentachlorophenol and summary of monitoring data for these two constituents.
8. Verification that the cropping pattern in the Mill Creek vicinity downstream of the discharge remains unchanged from that described in Finding No. 37 of the Waste Discharge Requirements,

or a description of cropping pattern changes (e.g., types of new crops grown in the subject area and whether water from Mill Creek is used to irrigate these new crops).

9. A summary of sludge monitoring, including:

   a. Annual sludge production in dry tons and percent solids.

   b. A schematic diagram showing sludge handling facilities and solids flow diagram.

   c. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of annual sludge production disposed of by each method.

      i. For **landfill disposal**, include: (a) the Order numbers of WDRs that regulate the landfill(s) used, (b) the present classifications of the landfill(s) used, and (c) the names and locations of the facilities receiving sludge.

      ii. For **land application**, include: (a) the locations of the site(s), and (b) the Order numbers of any WDRs that regulate the site(s).

      iii. For **incineration**, include: (a) the names and location of the site(s) where sludge incineration occurs, (b) the Order numbers of WDRs that regulate the site(s), (c) the disposal method of ash, and (d) the names and locations of facilities receiving ash (if applicable).

      iv. For **composting**, include: (a) the location of the site(s), and (b) the Order numbers of any WDRs that regulate the site(s).

10. A summary of groundwater monitoring in a format (both printed and electronic) selected in concurrence with Regional Water Board staff, including

    a. Hydrographs showing the groundwater elevation in approved wells for at least the previous five years or to the extent that such data are available, whichever is fewer. The hydrographs should show groundwater elevation with respect to the elevations of the top and bottom of the screened interval and be presented at a scale of values appropriate to show trends or

    variations in groundwater elevation. The scale for the background plots shall be the same as that used to plot downgradient elevation data;

    b. Graphs of the laboratory analytical data for samples taken from approved wells within at least the previous five calendar years (as data become available). Each such graph shall plot the concentration of one or more waste constituents specified above selected in concurrence with Regional Water Board staff. The graphs shall plot each datum, rather than plotting mean values, over time for a given monitoring well, at a scale appropriate to show trends or variations in water quality. For any given constituent, the scale for the background plots shall be the same as that used to plot downgradient data.

    c. All monitoring analytical data obtained during the previous four quarterly reporting periods, presented in tabular form, as well as CD or on 3.5” computer diskette.

11. A summary of the following Discharge 002 walnut orchard monitoring data collected during the previous 12 months: (1) daily coliform, (2) running 7-day median coliform, (3) maximum daily coliform for each month during the irrigation season, and (4) minimum daily chlorine residual.

12. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

The Discharger shall implement the above monitoring program on the first day of the month following effective date of this Order.

Ordered by:_____
PAMELA C. CREEDON, Executive Officer

_____
(Date)

GEA: 9/8/06